

## THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Adbanta Seeds V.H.

THE LOCAL THERE HAS BEEN PRESENTED TO THE

### Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED; OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

THEREFORE, THIS CERTIFICATE OF RIANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID CREATINGS) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY TARE FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC TO HELD SEMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITIORY AS PROVIDED BY LAW, THE CENTURE IT, OR SALE, OR REPRODUCING IT, OR CORTUNG IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT DESTRUCTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE LINE OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321)

FESCUE, TALL

'Greystone'

In Testimon Marcot, I have hereunto set my hand and caused the seal of the Hunt Unriety Frotestion Office to be affixed at the City of Washington, D.C. this sixth day of February, in year two thousand and seven.

Allast.

Q m Zulan

Commissioner Plant Variety Protection Office Agricultural Marketing Service Secretary of

REPRODUCE LOCALLY, Include form number and de	ate on all reprodu	actions				Form Approved - OMB No. 0581-0055
U.S. DEPARTMEN AGRICULTURAL I				e following statements are made in a e Paperwork Reduction Act (PRA) of		e with the Privacy Act of 1974 (5 U.S.C. 552a) and
SCIENCE AND TECHNOLOGY - P  APPLICATION FOR PLANT VA  (Instructions and information co	RIETY PROTECTI	ON CERTIFICATE				plant variety protection certificate is to be issued until certificate is issued (7 U.S.C. 2426).
1. NAME OF OWNER	Joseph Bardon, Olar	<i></i>		TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VA	RIETY NAME
Advanta Seeds B.V.			- 1	TF705	Grey	rstone
4. ADDRESS (Street and No., or R.F.D. No., City,	State, and ZIP Co	de, and Country)	5.	TELEPHONE (include area code)		FOR OFFICIAL USE ONLY
Dijkwelsestraat 70			+3	1 113 347 900	**	030072
NL - 4421 AJ Kapelle			6.	FAX (include area code)	L0	0.3 0 0 0 1 6
The Netherlands			+3	552237- 1 113 <del>330 110</del> (DT: 1/4/2006)	FILING	B DATE
7. IF THE OWNER NAMED IS NOT A "PERSON", ORGANIZATION (corporation, partnership, asso		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		DATE OF INCORPORATION		A
Incorporated	orazion, cro.)	The Netherlands	1	1 2 106/		January 13, 2003
10. NAME AND ADDRESS OF OWNER REPRESE	NTATIVE(S) TO S			) - 3 - 1986		FILING AND EXAMINATION FEES:
Kenneth Hignight C/O Advanta Pacific, LLC 33725 Columbus St SE Albany, OR 97322 USA	ANAME(S) TO S	SERVE IN THIS APPLICATION, (FIRS	r person	usied win receive an papers)	FEES RECEIVED	s 2,705.00 DATE January 13, 2003 CERTIFICATION FEE  \$ 768.00 DATE 1/8/2007
11. TELEPHONE (Include area code)	12. FAX (Includ	le area code)		13. E-MAIL		
(541) 967-8923	(541) 967-83					
14. CROP KIND (Common Name)	16. FAMILY NA	AME (Botanical)		18. DOES THE VARIETY CONTA	IN ANY T	RANSGENES? (OPTIONAL)
Tall Fescue	Poaceae			YES NO	SSICNET	USDA-APHIS REFERENCE NUMBER FOR THE
15. GENUS AND SPECIES NAME OF CROP	17. IS THE VAR	RIETY A FIRST GENERATION HYBRI	RID?	APPROVED PETITION TO D		ATE THE GENETICALLY MODIFIED PLANT FOR
Festuca arundinacea				COMMERICALIZATION		
<ol> <li>CHECK APPROPRIATE BOX FOR EACH ATTA (Follow instructions on reverse)</li> </ol>	CHMENT SUBMI	∏ED	ŀ			EED OF THIS VARIETY BE SOLD AS A CLASS B3(a) of the Plant Variety Protection Act)
a. 🗸 Exhibit A. Origin and Breeding History	of the Variety		-	YES (If "yes", answer i		
b. Z Exhibit B. Statement of Distinctness				21. DOES THE OWNER SPECIFY NUMBER OF CLASSES?	THATS	EED OF THIS VARIETY BE LIMITED AS TO
c. Exhibit C. Objective Description of Vari	iety			YES 🔲 NO		
d. 🔽 Exhibit D. Additional Description of the	Variety (Optional)					NDATION PREGISTERED CERTIFIED EED OF THIS VARIETY BE LIMITED AS TO
e. Z Exhibit E. Statement of the Basis of the	Owner's Owners	hip	-	NUMBER OF GENERATIONS		· · · · · · · · · · · · · · · · · · ·
f. Voucher Sample (2,500 viable untreate verification that tissue culture will be de repository)				YES NO	ER 1,2,3,	etc. FOR EACH CLASS.
g. Filing and Examination Fee (\$3,652), m States" (Mail to the Plant Variety Protect		reasurer of the United		G-FOUNDATION BRE	GISTERE	ED DCERTIFIED
23. HAS THE VARIETY (INCLUDING ANY HARVES	TED MATERIAL)	OR A HYBRID PRODUCED				NOTE THE VARIETY PROTECTED BY
FROM THIS VARIETY BEEN SOLD, DISPOSED OTHER COUNTRIES?	OF, TRANSFER	RED, OR USED IN THE U. S, OR		INTELLECTUAL PROPERTY	RIGHT (/	PLANT BREEDER'S RIGHT OR PATENT)?
YES V NO		•		YES 🗹 NO		
IF YES, YOU MUST PROVIDE THE DATE OF F FOR EACH COUNTRY AND THE CIRCUMSTA	FIRST SALE, DISF NCES. <i>(Please us</i>	POSITION, TRANSFER, OR USE space indicated on reverse.)		IF YES, PLEASE GIVE COUNT REFERENCE NUMBER. (Plea		E OF FILING OR ISSUANCE AND ASSIGNED ace indicated on reverse.)
entitled to protection under the provisions of Sec	e deposited in a p his sexually reprod tion 42 of the Plan	ublic repository and maintained for the luced or tuber propagated plant variety it Variety Protection Act	e durati ty, and t	on of the certificate.		with such regulations as may be applicable, or for orm, and stable as required in Section 42, and is
Owner(s) is (are) informed that false represental SIGNATURE OF OWNER	on netern can jeo			ÜRE OF OWNER		
Hennett Hignight	t		SIGNA	UKE OF GWNER		
NAME (Please print or type)  Kenneth Hignight			NAME (F	Please print or type)		
CAPACITY OR TITLE	DATE		CAPACI	TY OR TITLE	DATE	
Director of Research	1-	— <i>—</i>	Direct	tor of Research		
	I	(813 11/6/2006)				

See reverse for instructions and information collection burden statement,

### Exhibit A:

## Origin and Breeding History Greystone (ATF705) Tall Fescue

### 1. Origin:

The tall fescue (*Festuca arundinacea*) cultivar 'Greystone' traces its origin to a seed source obtained from Rutgers University in 1988. This seed originated from half-sib progenies from 22 clones and selected from a nursery which contained 109 plants. These plants were maintained at 15 cm height without irrigation and low fertility. Parental germplasm originated from plants selected in New Jersey, Maryland, Connecticut, Washington D.C., Alabama, Georgia, Idaho, Ohio, South Carolina, North Carolina, Missouri, Tennessee and Mississippi. They were collected from Golf courses, lawns, pastures, parks, and other similar turfs between 1961 and 1976. Population improvement projects involved many cycles of phenotypic assortive mating each followed by single plant progeny trials maintained in stressful turf environments.

### **Breeding History:**

- 1988: Seed obtained from Rutgers University was designated as the base population. A plant selection field was established in the fall of 1988.
- 1989: Plants were allowed to grow and observations were taken.
- 1990: Plants were allowed to grow and observations were taken.
- 1991: A 15 clone polycross group was formed before anthesis based on dwarf growth habit, dark foliage color and number of seed heads. Seed was harvested and a plant selection field of 2,000 plants was established.
- 1992: Off-type plants were rogued from the 2,000 plant block and the seed was harvested in bulk.
- 1993: In the fall a turf trial was sown with the University of Georgia, Griffin, GA.

- 1994: In the late summer survivors from the 1993 trial were removed, returned to Albany, OR for increase and designated ATF289.
- 1995: ATF289 was harvested in bulk.
- 1996: In the fall a turf trial was sown with the University of Georgia, Griffin, GA which included ATF289.
- 1997: In the late summer survivors from the 1996 trial were removed, returned to Albany, OR for increase and designated ATF504.
- 1998: ATF504 was harvested in bulk. A single plant nursery containing 1,140 plants was established of ATF504.
- 1999: Seventy four clones were selected from the single plant nursery before anthesis. The selections were based on crown density, genetic color, leaf texture, and freedom from disease. The 74 plants were then screened for the presence of the endophytic fungus (Neotyphodium coenophilum) and found to be 24% infected. The 74 clones were allowed to interpollinate. The 18 endophyte infected clones were harvested in bulk and designated ATF705. In the fall a breeder seed increase block was established of ATF705.\*
- 2000: The breeder seed block was harvested in the fall in bulk and designated ATF705 breeder seed. A morphological nursery was established in the fall for Plant Variety Protection (PVP) measurements.

<ATF**705>=** Greystone\* (817 11/4/2006)

### 2. Breeder Seed Maintenance:

A breeder seed multiplication was planted in isolation in 1999 in Albany, OR. Seed was harvested in bulk in 2000 and is maintained in cold storage. Seed propagation is limited to three generations, one each of foundation, registered, and certified.

### 3. Stability and Uniformity:

Greystone has been a stable uniform cultivar over two generations. No off-type or variant plants have been observed during the multiplication or reproduction. During the breeder seed multiplication 1% of the plants were removed to improve the uniformity of the population. These types were not observed during the subsequent generations. Turf plots of Greystone have been uniform.

Exhibit A (addendum): Statement of Stability and Uniformity for tall fescue Greystone

Greystone has been a stable uniform cultivar over two generations. No off-type or variant plants have been observed during the multiplication or reproduction. During the breeder seed multiplication 1% of the plants were removed to improve the uniformity of the population. The plants that were removed showed less vigor and had poor plant health. It is not known if the lack of vigor was due to environmental factors, genetic factors, or an environment by genetic interaction. These types were not observed during the subsequent generations. Turf plots of Greystone have been uniform and stable.

### Exhibit B:

### Novelty Statement of Greystone (ATF705) Tall Fescue

The following summary outlines the distinctive characteristics of Greystone. The novelty of Greystone is based on the unique combination of these characteristics. Greystone is most similar to Rebel II, but may be differentiated by using the following criteria:

- 1. Greystone has a heading date later than Rebel II (tables 1A, 1B).
- 2. The genetic color of Greystone is darker compared to Rebel II (tables 1A, 1B).
- Greystone has a mature plant height at least 16 cm shorter than Rebel II (tables 1A,
   1B).
- 4. Greystone has a shorter panicle compared to Rebel II (tables 1A, 1B).
- 5. The flag leaf characteristics for Greystone; height, length, width, sheath length and internode length are all shorter compared to Rebel II (tables 1A, 1B).
- 6. The leaf blade characteristics for Greystone; height, length, width and sheath length are all shorter compared to Rebel II (tables 1A, 1B).
- 7. The lengths of the lemma, palea and awn are all shorter for Greystone than Rebel II (tables 2A, 2B).
- 8. Greystone produces more plants with purple glumes compared to Rebel II (tables 3A,3B).
- 9. Rebel II produces no plants with four or more branches of the lower most whorl (tables 3A, 3B).

REPRODUCE LOCALLY. Include form number and date on all reproductions.

NAME OF APPLICANT(S)

Form Approved - OMB No. 0581-0055

Public reporting burden for this collection of information is estimated to everage 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gatherinalianing the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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### U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PROGRAM PLANT VARIETY PROTECTION OFFICE **BELTSVILLE, MD 20705**

EXHIBIT C (TALL & MEADOW FESCUES)

**VARIETY NAME** 

### **OBJECTIVE DESCRIPTION OF VARIETY** TALL & MEADOW FESCUES

(Festuca spp.)

TEMPORARY DESIGNATION

Advanta Seeds <del>Pacific</del> B.V. (BT:8/8/2006)	,    -	ATF705		Greystone
ADDRESS (Street and No., or R.F.D. No., City, State 33725 Columbus St. S. E. Dijkwelsetre Albany, OR NL - 4421 AJ The Netherland (ST: 8/8/2006)	•		PVPO	DFFICIAL USE ONLY NUMBER 0 3 0 0 0 7 2
Place the appropriate number that describes the variet 089). Characteristics described, including numerical befor SPACED PLANTS. Royal Horticultural Society with an asterisk * are characteristics which should be	measurements, shou y or any recognized (	ld represent those that ar	e typical for the va	ariety Measured data should
* 1. SPECIES: (With comparison varieties, use varie	ties within the spec	ies of the application var	riety)	
$_{6}$ 1 = $F$ . arundinacea (Tall)	Turf Type	es		
$1 = \text{Kentucky } 31 \ 2 = \text{Rebel}$	3 = Olympic 4	= Bonanza	5 = Arid	6 = Rebel II
7 = Shortstop $8 = $ Silverado	9 = Rebel Jr. 1	0 = Mini Mustang	11 = Crewcut	12 = Bonsai
	Forage Ty	<u>pes</u>		
20 = Kentucky 31	21 = Martin	22 = Forager	23 = Mozark	
24 = Kenhy	25 = AU Triumph	26 = Fawn	27 = Cajun	
2 = F. pratensis (Meadow)				
30 = Admira $31 = Bea$	umont 32 = Comt	essa 33 = Ensign	34 = Trader	
* 2. CYTOLOGY:				
42 Chromosome	Number			
3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted	; 2 = Adapted)			
2Transition Zone2West	_2_ Northeast	Other (Specify):		
* 4. MATURITY: (Date First Headed, 10% of Panicl 6 Maturity Class 1 = Very early ( )	e Emergence) 2 = AU Triumph	3 = Early (Fawn)	4 = K31, Ken	hy 5 = Medium (Rebel)
				Page 1 of 5

4. MATURITY: (continued)
4. MATURITY: (continued)  2 0 0 5 0 0 7 2  6 = Bonanza 7 = Late (Silverado) 8 = ( ) 9 = Very late
Date Headed _39.00 (days after April 1,) Location Albany, OR
Days earlier than
Maturity same as Comparison Variety
_4.67 Days later than _6
* 5. MATURE PLANT HEIGHT CM: (Average of 100 culms from crown to top of panicle, if panicle is nodding, straighten)  * INTERNODE LENGTH CM: (First internode subtending the flag leaf)
_9673_ cm Height1593_ cm InternodeLength
16.50_ cm Shorter than6
cm Taller than cm Longer than
* 6. GROWTH HABIT: (Mature Plants)
_3_ 1 = Prostrate ( ) 3 = Semiprostrate ( ) 5 = Horizontal ( )
7 = Semierect (Rebel) 9 = Erect (Mini Mustang)
* 7. RHIZOMES (Psuedo):
$_{_{_{_{_{_{_{_{_{_{_{_{_{1}}}}}}}}}}}}$
8. LEAF BLADE: (Tiller leaves/ turf color)
*_6_Color: $1 = \text{Light green}()$ $3 = \text{Medium light green}()$ $5 = \text{Green}()$
7 = Medium dark green ( ) 9 = Very dark green ( )
5 Specify rating of comparison variety
*_I_ Anthocyanin: 1 = Absent ( ) 9 = Present ( )
*_1_ Basal Hairs:

8. LEAF BLADE: (continued)				0300072
*_6_Width Class: 1 = 3	Very coarse ( )	3 = Coarse ( )		
7 = ]	Fine ( )	9 = Very Fine ( )		
* TILLER LEAF LENGTH CM: (First	leaf subtending the flag	g leaf) * TILL	ER LEAF WIDTH MM:	
_41.20_ cm Tiller Leaf Length		_8.70_1	mm Tiller Leaf Width	
_783 cm Shorter than _6_	`	0.95_ mr	m Narrower than_6_	
Length same as	Comparison Var	riety Wi	dth same as	Comparison Variety
cm Taller than	)		Longer than	
FLAG LEAF LENGTH CM:		FLAG	LEAF WIDTH MM:	
_39.23 cm Flag Leaf Length		_6.62 mm	Flag Leaf Width	
_7.34 cm Shorter than _6_	`	_1.30 mm	Narrower than _6_	
Length same as	Comparison Var	riety Wid	th same as	Comparison Variety
cm Longer than	<b>)</b>		Wider than	
* 9. LEAF SHEATH: (Basal Portion)	- Marien - 1			
*_1_ Anthocyanin (seedling):	1 = Absent (K31)	9 = Pr	esent ( )	
*_9_ Auricle Hairiness:	1 = Absent ( )	9 = Pr	esent ( )	
* 10. PANICLE: (At seed maturity excep	ot where noted.)			, , , , , , , , , , , , , , , , , , , ,
*_5_ Shape: 1 = Narrow-ta	pering ( ) 5	= Ovate ( )	7 = Oblong ( )	9 = Other (specify)
*_7_ Type: 1 = Compact (	appressed) 5	= Intermediate ( )	7 = Open ( )	9 = Other (specify)
*_7_ Orientation: $1 = N$	odding ( )	9 = Erect ( )		
*_1_ Branch Pubescence: 1 = G	ilabrous ( )	9 = Pubescent (	)	
*_1_ Anther Color (At anthesis)	: 1 = Yellowish Gree	en 2 = Green	3 = Bluish Green	÷
	4 = Purplish	5 = Reddish	6= Other (Specify)	
*_1_ Glume Color (At anthesis)	: 1 = Yellowish Gree	en 2 = Green	3 = Bluish Green	
*_77.97_ cm Panicle Length (fro	4 = Purplish om base to tip, if noddi	5 = Reddish ng, straighten; after an	6= Other (Specify) thesis)	
_7.90_ cm Shorter than6_				
Length same as cm Longer than	Com	parison Variety	·	

Winter Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:

1 = Application variety is less than comparison variety 2 = Same as 3 = More than, better, greater, darker, etc.

Character	Varieties	Rating	Character	Varieties	Rating
Leaf Width	Rebel II	1	Leaf Color	Rebel II	3
Panicle Color	Rebel II	2	Panicle Shape	Rebel II	2
Seed Size	Rebel II	3	Cold Injury	Rebel II	2
Winter Color	Rebel II	3.	Heat	Rebel II	3
Disease	Rebel II	3			

<sup>\* 15.</sup> EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural conditions, number of plants measured and plant spacing must be specified.

A morphological nursery designated 00PVPFA was established in September 2000, in Albany, Oregon. Experimental design consisted of 18 entries; 3 replications per entry; 20 plants per replication; for a total of 60 plants per entry. KY-31, Rebel II, Regiment and Tulsa were used as a standards. Plants were established on 2.5 foot centers with a skip row between replications and between entries.

The nursery received 30 pounds of nitrogen per acre rate following establishment and 50 pounds of nitrogen per acre per year in 2001 and 2002. The fertilizer source was 15 - 15 - 15 and was applied as a split application with ½ applied in the spring and ½ in the autumn. The nursery was sprayed twice each spring, 3 weeks between applications, with Tilt (20z/acre rate), to prevent stem rust. One pound of Karmex per acre rate was applied during the late summer to prevent emergence of volunteer seedlings.

Data was analyzed using analysis of variance for a randomized complete block design. Means were calculated for each replication and then analyzed.

### Exhibit D:

### **Additional Description**

### Greystone (ATF705) Tall Fescue

Greystone is an improved turf-type tall fescue. It has a shorter growth habit (tables 1A, 1B) than previously released tall fescue cultivars, such as KY-31 and Rebel II. Greystone has a medium-late maturity with a heading date later than KY-31 and Rebel II (tables 1A, 1B). Greystone exhibits a darker genetic color compared to KY-31, Rebel II, Tulsa and Regiment (tables 1A, 1B). The leaf blade length of Greystone is shorter compared to Regiment (tables 1A, 1B). Greystone has a shorter leaf blade height than Tulsa (tables 1A, 1B). The lengths of the lemma, palea and awn are all shorter for Greystone compared to Rebel II and Regiment (tables 2A, 2B). Greystone produces more purple pigmentation in the panicles compared to KY-31, Tulsa and Regiment (tables 3A, 3B). The expression of purple pigmentation in the glumes is more frequent in Greystone compared to KY-31 and Tulsa (tables 3A, 3B). Greystone has a higher seed weight than Rebel II, Tulsa and Regiment; but a lower weight than KY-31 (tables 3A, 3B). The dark pigmentation of the nodes is more frequent in Greystone compared to Rebel II, Tulsa, and Regiment; however KY-31 has a higher frequency than Greystone (tables 4A, 4B). Greystone exhibits a significantly improvement over Tulsa and Regiment (table 5) for turf quality, turf density and percent turf cover during repeated dry-downs over a two year period.

Table 1A

2001 Morphological Data

Cultivar Heading Date (days after April 1)	Anthesis Date (days after April 1)	Genetic Color	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Sheath Length (cm)
737 one F705 > 39.00	61.67	4.97	96.73	17.50	76.77	39.23	6.62	42.37	23.10	15.93	29.50	8.70	14.60	12.00
30.67	59.62	3.17	125.73	18.40	91.93	50.53	8.58	63.83	30.80	23.20	43.13	10.13	27.37	17.47
Rebel II 34.33	61.00	3.68	113.23	22.13	85.87	46.57	7.92	56.20	28.03	20.27	38.37	9.65	22.33	16.90
39.33	63.33	4.35	100.80	18.67	77.17	40.97	7.00	45.97	23.70	17.60	33.87	8.65	18.60	14.17
Regiment 35.67	62.00	4.25	99.37	19.00	78.67	41.97	7.63	42.87	22.50	15.40	34.27	9.15	15.77	12.97
(205) 1.95	1.37	0.36	06'9	1.68	4.89	2.92	0.94	4.50	2.00	1.77	2.89	0.79	2.38	1.55
V. 8/3006 3.62	1.58	5.27	5.58	96.9	5.00	5.77	10.18	8.03	6,58	8.48	689	6.67	11.28	9.17
10000 1000 1000 1000 1000 1000 1000 10	\$ (-)	12.47	90	0.70	3.00	5.77	10.18	8.03		6.58			8.48	8.48 6.89

Measurements taken in Albany, Oregon; 3 reps. 20 plants/rep = 60 data points.

Cultivar under evaluation.

Significant difference over two years one location.

Significant difference over one year one location.

Table 1B

2002 Morphological Data

	_			_	_	_									
Cultivar	Heading Date (days after April 1)	Anthesis Date (days after April 1)	Genetic Color	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Sheath Length (cm)
ATT-7059	57.33	63.00	5.40	113.43	25.67	76.77	45.33	6.07	64.87	27.63	26.53	41.20	7.30	29.47	16.33
	42.00	58.00	3.38	150.07	24.60	93.03	57.10	7.47	92.70	35.67	32.03	54 03	9.85	49 90	27.83
Rebel II	50.67	62.00	4.32	134.97	24,90	83.40	51.30	6.80	81.80	32.27	31.23	49.03	8 50	02.00	00.01
	58.67	64.00	5.13	113.97	24.73	73.83	43.73	6.03	66.13	02.9%	26.03	11.07	250	72.70	15.30
Regiment	55.33	62.67	4.70	120.43	24.93	79.40	47.83	29.9	69.57	27.90	27.37	15.17	7.57	23.00	10.//
33	3.21	1.42	0.24	5.03	1.16	4.66	2.54	0.61	3.67	1.14	1.45	2.44	75.7	32.00	17.77
anso/k	4.13	1.62	3.33	3.24	3.40	4.60	4.25	7.02	4.09	3.12	4.10	7.31	200	000	0000
									` :	1	2	τ.	2.0	5.38	2.8/

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

Cultivar under evaluation.

Significant difference over two years one location.

Significant difference over one year one location.

Table 2A

## 2001 Laboratory Morphological Data

	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Palea Length (mm)	Palea Width (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikel <del>e</del> ts per Panicle	Length of Spike From Lower Most Whorl to Tip (mm)
Greystone CATF/052	5.47	1.47	1.97	6.48	1.41	4.91	7.17	12.50	109.40	59.17	18.42	99.00	22.63
KY-31	6.16	1.56	2.15	7.28	1.49	5.77	6.77	13.80	115.03	61.87	15.10	110.00	27.20
Rebel II	5.75	1.49	2.24	6:99	1,40	5.11	5.80	12.30	100.60	58.53	15.00	101.00	24.33
Tulsa	5.62	1.44	2.11	6.52	1.34	5.05	6.77	12.30	102.60	56.53	16.82	100.67	23.40
Regiment	5.96	1.53	2.29	6.96	1.44	5.16	6.47	13.13	114.27	60.73	16.07	92.33	24.50
LSD(0,05)	0.27	80:0	0.19	0.21	80.0	0.25	0.75	0.89	14.06	5.72	2.69	9.92	2.09
C.V.	3,53	3.66	6.55	2.26	4.00	3.62	8,13	5.13	10.51	7.76	11.99	7.65	7.04
Moseumomentatolom in Albani, Ones, 3	alean in Alba			, , , , , , , , , , , , , , , , , , , ,								20.7	

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

Cultivar under evaluation.

Significant difference over two years one location.

Significant difference over one year one location.

(GT:8/8/2006)

Table 2B

2002 Laboratory Morphological Data

14.0	,	,	_										
	Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Palea Length (mm)	Palea Width (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Spike From Lower Most Whorl to Tip
ureystone <atf705></atf705>	6.23	1.30	0.86	60.9	1.11	4.66	5.15	10.63	87.37	55.57	15.90	92.00	(mm)
KY-31	7.23	1.37	0.89	6.98	1.23	5.23	4 88	11.43	00 40	24.57		20.37	43.40
								2	76.40	04.37	15.80	114.67	30.13
Rebel II	6.92	1.43	1.34	89'9	1.26	5.12	4.93	11.57	100.43	61.90	16.08	102.67	27.00
Tulsa	19.9	1.33	0.80	6.23	1.11	4.75	4.98	10.40	86.37	\$2.33	16.08	96.50	20.72
Peniment	02.9	1 37	20	1	,						10.00	20.00	23.33
Transfer to	0.70	/C'T	1.04	0.33	1.17	4.80	4.77	10.97	92.33	56.73	14.02	87.33	24.60
$\Gamma_{\rm SD}$ (,05)	0.31	0.09	0.21	0.20	90.0	0.31	0.55	0.64	11.42	5.58	2.81	10.71	2 14
© √5/ <b>c</b> #300	3.42	5.07	15.21	2.28	3.87	4.66	8.02	4.30	56.6	765	12.40	4 0	
N 62000								5	1	3	13.47	24.2	6/5

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

Cultivar under evaluation.

Significant difference over two years one location.

Significant difference over one year one location.

Table 3A

2001 Additional Morphological Measurements of the Panicle

Cultivar	Anther Color % Purple	Panicle Color % Purple	Lemma Hairs % Present	Palea Hairs % Present	Lemma Awn % Present	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Ovate	Panicle Type % Open	Branch Lower Whorl =1	Branch Lower Whorl =2	Branch Lower Whorl =3	Branch Lower Whorl	Seed Weight mg/1,000 Seeds
47747057 47747057	0.	23	86	100	100	3	0	88	12	25	25	73	,	2655
10.02	•	t	- ~											200
16-17	0	,	97	100	100	0	12	82	18	10	10	82	<b>∞</b>	3345
Rebel II	0	15	86	86	100	0	10	83	12	13	7.3	10		0543
Tulsa	0	<u>~</u>	0.7	100	100	,						6		C+C7
				700	700	c	0	/0	30	25	25	73	23	2395
Regiment	7	10	76	100	100	7	3	85	15	27	7.0	Ę	,	2105
		·						,		-	ì	7	7	7173

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

Table 3B

2002 Additional Morphological Measurements of the Panicle

Cultivar	Anther Color % Purple	Panicle Color % Purple	Lemma Hairs % Present	Palea Hairs % Present	Lemma Awn % Present	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Ovate	Panicle Type % Open	Branch Lower Whorl =1	Branch Lower Whorl	Branch Lower Whorl	Branch Lower Whorl	Seed Weight mg/1,000 Seeds
Greystone ATP7055	3	32	86	100	100	13	0	17	83	30	છ	3	2	2704
KY-31	5	13	76	100	100	3	0	7	86	23	73	3	0	3348
Rebel II	\$	30	86	100	100	10	0	23	77	28	72	6		2562
Tulsa	2	22	86	100	100	5	0	25	8	43	57	, 0	, 0	2369
Regiment	2	23	93	100	100	12	0	23	77	41	57			2259
feasurements	taken in Alba	any, Oregon:	Measurements taken in Albany, Oregon: 3 rens: 20 nlants/	s/ren = 60 data nointe	a nointe								,	

(90/44/8:19)

Cultivar under evaluation.

# 2001 Additional Morphological Measurements of the Leaf Blade

Cultivar	Grounds	4	4								
	Habit at Anthesis % Prostrate	Habit at Anthesis % Semi- Prostrate	Grown Habit at Anthesis % Erect	Anthocyanm Present in the Leaf Blade % Purple	Leaf Blade Margin Roughness to the Touch % Smooth	Leaf Blade Margin Roughness to the Touch % Semi-Rough	Leaf Blade Margin Roughness to the Touch % Rough	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Rhizomes % Present	Node Color % Distinct
Gre/Ston											i
CATF705	15	70	15	0	73	1.5	12	06	82	0	25
17.77.71	9	1									) I
KI-31	40	50	10	0	70	15	15	80	92	C	48
Rebel II	10	77	13	U	63						:
			2	,	Co	7.7	0	87	82	0	13
Tulsa	10	78	12	0	89	18	13	88	87		3.
									,	>	CT
Regiment	7	08	13	0	83	12	٠,	78			Š
	7.							2	2	_	7

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

Table 4B

# 2002 Additional Morphological Measurements of the Leaf Blade

Cultivar	Growth Habit at Anthesis % Prostrate	Growth Habit at Anthesis % Semi- Prostrate	Growth Habit at Anthesis % Erect	Anthocyanin Present in the Leaf Blade % Purple	Leaf Blade Margin Roughness to the Touch % Smooth	Leaf Blade Margin Rouginess to the Touch % Semi-Rough	Leaf Blade Margi Roughness to the Touch % Rough	n Leaf Blade Margin Hairs W. Present	Leaf Sheath Auricle Hairs % Present	Rhizomes % Present	Node Color % Distinct
CATP/05>	15	70	15	0	73	15	12	85	92	0	30
KY-31	40	50	10	0	75	13	12	80	77	0	40
Rebel II	10	1.1	13	0	77	13	10	87	92	0	23
Tulsa	10	82	12	0	56	72	17	85	88	0	25
Regiment	7	80	13	0	58	22	20	87	95	0	3
Manne	Monominanta talen in Alli	,	, , ,							,	}

(GT: \$/17/106)

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

Cultivar under evaluation.

### 1999 Tall Fescue Drought Trial

### University of Georgia - Griffin, GA

(Dry Down Data - Averages For 2 Years of Data)

### Table 5

Cultivar	Turf Quality	Turf Density	% Turf Cover	Turf Color
Tulsa	5.7	6.2	84	6.3
Regiment	5.6	5.9	79	6.5
Greystone (ATF 705>	6.3	6.7	90	6.6
ATF706	5.9	6.5	90	6.2
Plantation	6.0	6.5	85	6.7
LSD(.05)	0.45	0.41	5.90	0.36
LSD (.05) (&1: 8/8/2006) C.V.	10.00	10.00	7.00	9.00

Measurements taken in Albany, Oregon; 3 reps; 20 plants/rep = 60 data points.

- Cultivar under evaluation.
- Significant difference over two years one location.
- Significant difference over one year one location.

Data provide by Dr. R.R. Duncan; University of Georgia; Griffin, GA.

Note - Turf coverage is 24 months after establishment and taken in mid-September 2001. The visual quality rating is the average of 17 ratings over both growing seasons. Grasses were mowed at 2.0 inches and subjected to seven repeated dry-down periods over the summers of 2000 and 2001. No supplemental irrigation was applied in 2001 except in late June. Each dry-down resulted in significant leaf firing (% turf).

REPRODUCE LOCALLY. Include form			ons. FURIVI P	PPROVED -	ONE NO. 0301-0035
U.S. DEPARTMENT ( AGRICULTURAL MA  EXHIB	RKETING SER <sup>1</sup> I <b>T E</b>	VICE	Application is required in or certificate is to be issued (7 confidential until the certific	U.S.C. 2421)	
STATEMENT OF THE BA	SIS OF OWN	ERSHIP			
1. NAME OF APPLICANT(S) Advanta Seeds B. V.			2. TEMPORARY DESIGNA OR EXPERIMENTAL NI ATF705		3. VARIETY NAME  Greystone
4. ADDRESS (Street and No., or R.F.D.	No., City, State,	and Zip, and Country)	5. TELEPHONE (Include a	rea code)	6. FAX (Include area code) 552237
Dijkwelsestraat 70 NL-4421 AJ Kapelle			+31 113 347 900	)	+ 31 113 <del>347 930</del> (6T: 9/8/106)
The Netherlands 7. PVPO NUMBER 200300072					
(8T: 11/1/2006)  8. Does the applicant own all rights to the	o verioty? Mark an	"Y" in the appropriate b			12.17
o, Dues the approant own an ignis to the	e variety: Wark an	TA arate appropriate of	ook a no produce expansis	<b>⊠</b> YES	□ <sub>NO</sub>
9. Is the applicant (individual or compan	y) a U.S. national (	or a U.S. based company	y? If no, give name of count	ry.	
			the Netherlands	YES	⊠ <sub>NO</sub>
10. Is the applicant the original owner?			If no, please an	swer <u>one</u> of t	he following:
	X YES				
a. If the original rights to variety were	owned by individu	ual(s), is (are) the origina	al owner(s) a U.S. National(s)?	?	
	☐ YES	□ NO	If no, give name	e of country	
b. If the original rights to variety were	owned by a comp	cany(ies), is (are) the orig	ginal owner(s) a U.S. based o	ompany?	
	☐ YES	⊠ <sub>NO</sub>	If no, give name	e of country	the Netherlands
11. Additional explanation on ownership	(If needed, use the	e reverse for extra spac	e):		
PLEASE NOTE:					
Plant variety protection can only be afford	ded to the owners	(not licensees) who mee	et the following criteria:		
If the rights to the variety are owned by national of a country which affords sin	y the original breed nilar protection to r	der, that person must be nationals of the U.S. for t	a U.S. national, national of a the same genus and species.	UPOV memb	er country, or
2. If the rights to the variety are owned by nationals of a UPOV member country	y the company whi , or owned by natic	ich employed the original onals of a country which	l breeder(s), the company mu affords similar protection to n	st be U.S. bas ationals of the	sed, owned by U.S. for the same genus and species.
3. If the applicant is an owner who is not	the original owner	, both the original owner	and the applicant must meet	one of the abo	ove criteria.
The original breeder/owner may be the in	dividual or compa	ny who directed the final	breeding. See Section 41(a)(	2) of the Plan	t Variety Protection Act for definitions.
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